



IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Angel CERCOS et al.

Confirmation No.: 2320

Application No.: 10/765,073

Examiner: Daniel COLLILLA

Filing Date: 01/28/2004

Group Art Unit: 2854

Title: PRINT MEDIA DRIVE

Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 02/22/2006.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

**(complete (a) or (b) as applicable)**

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

( ) one month	\$120.00
( ) two months	\$450.00
( ) three months	\$1020.00
( ) four months	\$1590.00

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

( ) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: \_\_\_\_\_

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Respectfully submitted,

Angel CERCOS et al.

By

*William T. Ellis*

for / William T. Ellis

Attorney/Agent for Applicant(s)

Reg. No. **26,874**

Date: **03/09/2006**

Telephone No.: **(202) 672-5300**

Reg. No.  
38819



Docket No. 200300571-1  
(F&L Docket No. 084061/0624)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant: Angel CERCOS et al.  
Title: PRINT MEDIA DRIVE  
Appl. No.: 10/765,073  
Confirmation No.: 2320  
Filing Date: 1/28/2004  
Examiner: COLILLA, Daniel James  
Art Unit: 2854

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**Mail Stop APPEAL BRIEF - PATENTS**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

The following is the Appellant Appeal Brief under the provisions of 37 C.F.R. 41.37.

**1. Real Party in Interest**

The real party in interest is Hewlett-Packard Development Company, L.P., which is the assignee of record.

**2. Evidence Appendix**

There are no related evidence that will directly affect, be directly affected by or have a bearing on the present appeal, that are known to appellant, the assignee, or the appellant's patent representative. The Evidence Appendix (Section 10), attached hereto, states "None".

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**3. Related Appeals and Interferences**

There are no related appeals or interferences that will directly affect, be directly affected by or have a bearing on the present appeal, that are known to appellant, the assignee,

or the appellant's patent representative. The Related Proceedings Appendix (Section 11), attached hereto, states "None".

#### **4. Status of Claims**

The present appeal is directed to claims 1-5 and 17, whereby claims 8, 9, 12, 15, 16 and 18-26 are allowed and whereby claim 14 is indicated as being allowed if amended to place that claim in independent form. A copy of the presently pending claims under rejection are attached herein in the Claims Appendix (Section 12).

Please note that it is assumed that the minor amendment made to claim 3, as made in the reply to the final Office Action, has been entered, since it does not affect the scope of that claim. The Advisory Action did not indicate whether or not such an amendment would be entered upon filing an Appeal, but again it is assumed that it will be entered.

Claims 1-5 and 17 are finally rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,217,143 to Munakata et al. in view of JP 2003-231331 to Otsuka.

#### **5. Status of Amendments**

Claims 1-19 were initially pending in the application filed on January 28, 2004. Claims 1-4, 8, 9, 12 and 14-18 were amended, claims 6, 7, 10, 11 and 13 were canceled, and claims 20-26 were added in an Amendment and Reply Under 37 C.F.R. § 1.111 filed July 25, 2005, in reply to a first Office Action on the merits mailed on March 24, 2005.

Claim 3 was amended in a very minor way, without affecting the scope of that claim, in an Amendment and Reply Under 37 C.F.R. § 1.116 filed January 19, 2006, in reply to a second (and final) Office Action on the merits mailed on November 23, 2005.

A Notice of Appeal was filed on February 22, 2006 in response to an Advisory Action mailed on January 30, 2006, which maintained the final rejection of claims 1-5 and 17.

#### **6. Summary of the Invention**

Claims 1-5 recite an arrangement for driving a print media through a hardcopy apparatus. Claim 17 recites a hardcopy device.

Figure 4 illustrates one possible implementation of the system components for the hardcopy apparatus and the hardcopy device. Figure 5 illustrates another possible

implementation of the system components of the hardcopy apparatus and the hardcopy device.

As described on page 1 of the specification, a problem exists with conventional drive systems in that poor printing may occur as a print media (e.g., a sheet of paper to be printed with text or drawings) passes from drive rollers (positioned before a print region) to feed rollers (positioned after a print region). To fix this problem, prior art systems overdrive of the drive rollers in order to prevent “cockle” from occurring.

However, there is a problem in that when the top and/or bottom edges of the print media need to be printed with information, such systems are not capable of handling those situations well.

To solve such a problem, a system such as shown in Figure 4 is provided. That system has a common drive arrangement between feed roller 11 and overdrive roller 21, whereby Figure 5 shows an alternative arrangement whereby separate drive arrangements are provided for the feed roller 11 and the drive roller 21. In each case, an optical detector 29, 129 is provided to detect a location of a trailing edge 19 of the print media 14 and to cause the drive arrangement(s) to change the drive parameters of the overdrive roller as the print media becomes disengaged from the feed roller arrangement 11, 12. See page 7 of the specification.

With such control of the drive parameters, smooth printing of the print media can be performed at all stages of when the print media passes through from the feed rollers to the drive rollers.

## **7. Issues**

The issues on appeal are: (1) whether the examiner erred in rejecting claims 1-5 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Munakata et al. and Otsuka.

## **8. Argument**

**I.** It is respectfully submitted that the final rejection of claims 1-5 and 17 under 35 U.S.C. § 1023(a) as being unpatentable over Munakata et al. and Otsuka is erroneous for at least the following reasons.

**A. Claim 17**

Independent claim 17 is directed to a hardcopy device comprising at least one printhead arranged to apply ink to a print media and means for moving a print media past the printhead. The media moving means comprises a first roller member for moving the print media towards the printhead and a second roller member for moving the print media away from the printhead. The media moving means also comprises drive means for operating the roller members with respective drive parameters. The arrangement according to claim 17 is such that, when a leading edge of a print media is between the roller members, at least one of the drive parameters is different from when a print media extends fully between the roller members.

In the rejection of claim 17 as made in the final Office Action, the PTO acknowledges that Munakata et al. fails to disclose the claimed feature of driving a first roller member with a different drive parameter as a leading edge of the print media process through the print zone. To overcome this admitted shortcoming, the PTO asserts that Munakata et al. discloses a first roller member 1, a second roller member 3 and a drive device 6 arranged to drive the first and second roller members in the manner which is illustrated in Figure 1 of that reference.

The rejection then goes on to advance that the Otsuka reference teaches an arrangement in which the printing speed is adjusted according to the changes in the power supply. In accordance with the rejection, Figure 7 of Otsuka shows that the "printing speed" is at a maximum when printing is initiated and continues to descend until a minimum below speed is reached. In support of this, the PTO cites paragraph [0048] of the machine translation of Otsuka.

The response to the final Office Action pointed out that paragraph [0048] refers to Figure 6 of Otsuka, while paragraph [0049] refers to Figure 7 of Otsuka, and thus it is paragraph [0049] that is pertinent to the features shown in Figure 7 of Otsuka. The statements made in Advisory Action appear to agree with this assessment of Otsuka.

The Advisory Action also states that while Figure 7 of Otsuka deals with print head speed, it also states that the feed rate of the record medium is controlled corresponding to the

drive period of the recording head driving means, as mentioned in paragraph [0008] of Otsuka. Thus, in Otsuka, when the print head slows down due to a voltage drop in the voltage supplied to the print head, the feed rate of the recording medium slows down accordingly, and when the print head speeds up due to a voltage rise in the voltage supplied to the print head, the feed rate of the recording medium speeds up accordingly.

While one could argue that Otsuka discloses changing the speed of the feed rate of a print media to a print region, there is nothing in Otsuka that teaches or suggests that a drive parameter for driving the print media through a print region changes based on whether a leading edge of the print media is between roller members or whether the print media extends fully between the roller members. Rather, Otsuka changes the drive parameters based on a voltage amount supplied to a print head, which has nothing at all to do with a current location of a leading edge of a print media.

Furthermore, it is respectfully asserted that the teachings of the Munakata et al. reference cannot be combined with the teachings of the Otsuka reference. In particular, the Otsuka reference discloses only one roller, as different from the two rollers in the Munakata et al. arrangement. In this connection, the teachings of the Munakata et al. reference have not been considered to the degree which is statutorily required. For example, column 7, line 60 - column 8, line 4 of the Munakata et al. reference discloses that the ratio of the urging of the upstream side driven roller to the urging of the downstream side driven roller 4, is set to about 4:1. As a result, the discharge roller 3 feeds a printing medium 9 while slipping thereby preventing the printing medium 9 from rising or slackening in the printing operation unit. How this particular 1:4 ratio would be effected by the purported control of a single roller has not been established in this rejection. Indeed, it is not clear that any attempt to modify the rotational speed of either one of the two rollers of Munakata et al. as per the teachings of Otsuka, would not in fact render the operation of the Munakata et al. arrangement at least partially inoperative for its intended purpose.

Thus, the features recited in independent claim 17 are patentable over the combined teachings of Matsuzawa and Otsuka.

**B. Claims 1-5**

Independent claim 1 is directed to an arrangement for driving a print media through a hardcopy apparatus, in which the arrangement comprises a first roller member for feeding the print media to a print zone, a second roller member for removing the print media from the print zone, a drive device arranged to drive the first roller member with first respective drive parameter as the print media passes through the print zone, and arranged to drive the second roller member with second respective drive parameters as the print media passes through the print zone. The drive device is arranged to drive the first roller member with different drive parameters as the leading edge of the print media passes through the print zone.

In the rejection of claim 1 as made in the final Office Action, the PTO acknowledges that Munakata et al. fails to disclose the claimed feature of driving a first roller member with a different drive parameter as a leading edge of the print media process through the print zone. To overcome this admitted shortcoming, the PTO asserts that Munakata et al. discloses a first roller member 1, a second roller member 3 and a drive device 6 arranged to drive the first and second roller members in the manner which is illustrated in Figure 1 of that reference.

The rejection then goes on to advance that the Otsuka reference teaches an arrangement in which the printing speed is adjusted according to the changes in the power supply. In accordance with the rejection, Figure 7 of Otsuka shows that the “printing speed” is at a maximum when printing is initiated and continues to descend until a minimum below speed is reached. In support of this, the PTO cites paragraph [0048] of the machine translation of Otsuka.

The response to the final Office Action pointed out that paragraph [0048] refers to Figure 6 of Otsuka, while paragraph [0049] refers to Figure 7 of Otsuka, and thus it is paragraph [0049] that is pertinent to the features shown in Figure 7 of Otsuka. The statements made in Advisory Action appear to agree with this assessment of Otsuka.

The Advisory Action also states that while Figure 7 of Otsuka deals with print head speed, it also states that the feed rate of the record medium is controlled corresponding to the drive period of the recording head driving means, as mentioned in paragraph [0008] of

Otsuka. Thus, in Otsuka, when the print head slows down due to a voltage drop in the voltage supplied to the print head, the feed rate of the recording medium slows down accordingly, and when the print head speeds up due to a voltage rise in the voltage supplied to the print head, the feed rate of the recording medium speeds up accordingly.

While Otsuka discloses the changing of a feeding speed for feeding a print media, this changing of the feeding speed is based solely on the detected current voltage supplied to a print head, and has nothing at all to do with the passage of the leading edge of the print media through the print zone.

Furthermore, it is respectfully asserted that the teachings of the Munakata et al. reference cannot be combined with the teachings of Otsuka. In particular, Otsuka discloses only one roller, as different from the two rollers in the Munakata et al. arrangement. In this connection, the teachings of the Munakata et al. reference have not been considered to the degree which is statutorily required. For example, column 7, line 60 - column 8, line 4 of Munakata et al. discloses that the ratio of the urging of the upstream side driven roller to the urging of the downstream side driven roller 4, is set to about 4:1. As a result, the discharge roller 3 feeds a printing medium 9 while slipping thereby preventing the printing medium 9 from rising or slackening in the printing operation unit. How this particular 1:4 ratio would be effected by the purported control of a single roller has not been established in this rejection. Indeed, it is not clear that any attempt to modify the rotational speed of either one of the two rollers of Munakata et al. as per the teachings of Otsuka, would not in fact render the operation of the Munakata et al. arrangement at least partially inoperative for its intended purpose.

Thus, the features recited in claims 1-5 (claims 2-5 depend from claim 1) are patentable over the combined teachings of Matsuzawa and Otsuka.



**9. Conclusion**

In view of above, Appellants respectfully solicit the Honorable Board of Patent Appeals and Interferences to reverse the rejections of the pending claims and pass this application on to allowance.

Respectfully submitted,

Date March 9, 2006

By Phillip J. Articola

William T. Ellis

Registration No. 26,874

Phillip J. Articola

Registration No. 38,819

Attorneys for Applicants

10. **EVIDENCE APPENDIX**

None

**11. RELATED PROCEEDINGS APPENDIX**

None

## 12. CLAIMS APPENDIX

### LIST OF THE CLAIMS ON APPEAL (WITH STATUS IDENTIFIERS)

1. (Previously Presented) An arrangement for driving a print media through a hardcopy apparatus comprising a first roller member for feeding the print media to a print zone, a second roller member for removing the print media from the print zone, a drive device arranged to drive the first roller member with first respective drive parameters as the print media passes through the print zone, and arranged to drive the second roller member with second respective drive parameters as the print media passes through the print zone, wherein the drive device is arranged to drive said first roller member with different drive parameters as a leading edge of said print media passes through the print zone.
2. (Previously Presented) An arrangement according to claim 1 wherein said drive parameters include a speed of the respective roller member during print media advance movements.
3. (Previously Presented) An arrangement according to claim 1 wherein said drive parameters include an amount of rotation of the respective roller member during print media advance movements.
4. (Previously Presented) An arrangement according to claim 1 wherein said drive parameters include a tractional force applied by the respective roller to the print media during media advance movements.
5. (Original) An arrangement according to claim 1, wherein said drive parameters are changed gradually.
17. (Previously Presented) A hardcopy device comprising at least one printhead arranged to apply ink to a print media and means for moving a print media past said printhead, said media moving means comprising a first roller member for moving the print media towards

said printhead and a second roller member for moving the print media away from said printhead, drive means for operating said roller members with respective drive parameters, the arrangement being such that, when a leading edge of a print media is between said roller members, at least one of said drive parameters is different from when a print media extends fully between said roller members.